

## NEW NAMES IN ARENARIA (CARYOPHYLLACEAE)

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*Arenaria* as it occurs in the Southeastern and Gulf Southwestern United States is a very heterogeneous assemblage which for convenience is best treated as a single genus, in the broad sense of Fernald (1919, 1950) and Maguire (1951, 1952). To it may be added a few species from related genera in which they are anomalous or transitional toward *Arenaria*. Mattfeld (1929) rejected Fernald's union of *Alsine* (*Minuartia*) with *Arenaria*, but his version of *Minuartia* does not carry conviction. It too is extremely heterogeneous both morphologically and geographically, and one wonders what gain there is in maintaining two large and poorly differentiated genera instead of one. Fernald's arguments are answered only in part. That the difference between a capsule dehiscing by three valves and one dehiscing by six teeth is not great is shown for example by *Arenaria Bentharii*, in which the capsule dehisces somewhat unevenly, appearing at times to have three partly divided valves, though ordinarily it is about equally 6-parted. In *A. Drummondii*, the three valves commonly are slightly but distinctly notched at apex. Surely it is better to keep these in a single admittedly diverse genus.

About one point I must agree with Mattfeld. Like Small before (under *Alsinopsis*), he associates the Texan *Stellaria Nuttallii* (*Arenaria Drummondii*) with *Arenaria patula*, both species with notched petals much like those of *Cerastium*, and approaching (but less extreme than) those of *Stellaria*. If notched petals may occur in *Arenaria*, then it is plain that other North American species of *Stellaria* with merely notched rather than deeply bifid petals must also be placed there. Furthermore, since capsule shape varies greatly within *Arenaria*, there is no good reason to leave under *Cerastium* the handful of anomalous species which have three styles, an essential feature of *Arenaria*. These changes will leave both *Cerastium* and *Stellaria* more homogeneous, while the circumscription of the already very heterogeneous *Arenaria* is not significantly altered.

The necessary new names (and one previously published but not mentioned in Maguire's revision), together with a new species and a routine new combination, may be grouped as follows.

### 1. SPECIES FROM STELLARIA WITH MERELY NOTCHED PETALS

A. DRUMMONDII Shinners, Field & Lab. 17: 89. 1949. *Stellaria Nuttallii* T. & G., Fl. N.A. 1: 183—184. 1838. (Not *Arenaria Nuttallii* Pax, 1893.) Peculiar in having pedicels which become reflexed in age. *Minuartia Nuttallii* (T. & G.) Mattfeld, 1921, is illegitimate, being a later homonym of *M. Nuttallii* (Pax) Briquet, 1911. Despite the similarity in petals, this does not seem to be closely related to *A. patula*.

A. **Jamesiana** (Torrey) Shinnery, comb. nov. *Stellaria Jamesiana* Torrey, Ann. Lyc. N.Y. 2: 169. 1827. (The spelling *Jamesii* was adopted later.) There is startlingly close resemblance between this and the Asiatic *A. holosteoides* (C. A. Meyer) Edgeworth in Hooker f., Fl. British India 1: 241, 1874. The following collection extends the range of *A. Jamesiana* to TEXAS. Culberson Co.: infrequent annual (*sic*) beneath pines, South McKittrick Canyon, top of Guadalupe Mts., alt. 8000 ft., J. C. Hunter Ranch, Barton H. Warnock 12025, 5 Sept. 1954 (SMU).

A. **Stephaniana** (Willdenow) Shinnery, comb. nov. *Stellaria Stephaniana* Willd. in Schlecht., Berlin Mag. 1816 p. 194. (Not seen; reference taken from DC., Prodr. 1: 399, 1824, and Ledebour, Fl. Ross. 1: 379—380, 1842.) *Stellaria dichotoma* L., Sp. Pl. 2: 603. 1753. (Not *Arenaria dichotoma* Krock, 1793, nor Moench, 1794.) "Petals divided only  $\frac{1}{2}$ " (Popov, Flora Srednei Sibiri 1: 406, 1957, in description of *Stellaria* Series *Dichotomae*). Represented in North America by the following.

A. **STEPHANIANA** var. **americana** (Porter) Shinnery, comb. nov. *Stellaria dichotoma* var. *americana* Porter ex B. L. Robinson, Proc. Amer. Acad. 29: 289. 1894. *Alsine americana* (Porter) Rydberg, Fl. Montana (Mem. N.Y. Bot. Gard. 1) p. 144. 1901. *Stellaria americana* (Porter) Standley, Fl. Glacier Nat. Park (Contrib. U.S. Nat. Herb. 22 pt. 5) p. 336, 1921.

## 2. SPECIES FROM CERASTIUM WITH THREE STYLES

A. **anomala** (Waldstein & Kitaibel) Shinnery, comb. nov. (nom. nov. by Code recommendation, the basynym being a later homonym). *Cerastium anomalum* Waldst. & Kit. ex Willd., Sp. Pl. (ed. 4) 2: 812. 1799. (Not *C. anomalum* Schrank, Briefe ueber den Donaumoos p. 75. 1795. This reference not seen; taken from Schwarz, cited under *Cerastium dubium*, below.) *Stellaria viscida* Bieberstein, Fl. Taur.-Cauc. 1: 342. 1808. (Substitute name for *Cerastium anomalum*, proposed without reference to *C. anomalum* Schrank, hence illegitimate.) *Stellaria dubia* Bastard, Suppl. Fl. Maine-et-Loire p. 24. 1812. (Not seen; taken from Schwarz, l.c. Not *Arenaria dubia* Suter, Fl. Helv. 1: 266—267. 1802. This itself is illegitimate, being a substitute name for *A. hybrida* Villars, Prosp. p. 48, 1779, but it nevertheless prevents transfer of *Stellaria dubia* to *Arenaria*.) *Cerastium dubium* (Bastard) Schwarz, Mitt. Thuering. Bot. Ges. 1: 98. 1949.

Soellner (1954) reports that *C. anomalum* and *C. cerastoides* (*Arenaria trigyna*, below) are clearly allied and differ from *Cerastium* proper cytologically.

A. **argaea** (Boissier & Balansa) Shinnery, comb. nov. *Cerastium argaeum* Boiss. & Bal. ex Boiss., Diagn. Ser. II. 6: 38. 1849.

A. **iranica** Shinnery, nom. nov. *Cerastium persicum* Boiss., Diagn. Ser. I, 1: 54. 1842. (Not *Arenaria persica* Boiss., 1842.)

A. **Kotschyi** (Boissier) Shinnery, comb. nov. *Cerastium Kotschyi* Boiss., Fl. Or. 1: 715. 1867.

*A. trigyna* (Villars) Shinnars, comb. nov. *Cerastium trigynum* Vill., Prosp. p. 48. 1779. (Not seen. Published also in Hist. Pl. Dauph. 1: 269, 1786, and 3: 645, 1789.) *Stellaria cerastioides* L., Sp. Pl. 1: 422. 1753. (Not *Arenaria cerastioides* Poiret, 1789, nor Persoon, 1805.) *Cerastium cerastioides* (L.) Britton, Mem. Torr. Bot. Club 5: 150. 1894. (As *cerastioides*.) *Cerastium lapponicum* Crantz, Inst. 2: 402. 1766. (Substitute name for *Stellaria cerastioides* L., hence illegitimate.) *C. refractum* Allioni Fl. Pedem. 2: 117. 1785.

### 3. SPECIES FROM STELLARIA WITH SLIGHTLY EMARGINATE OR ENTIRE PETALS OR NONE

*A. Fassettii* Shinnars, nom. nov. *Stellaria muscorum* Fassett, Rhodora 39: 460. (Not *Arenaria muscorum* Fischer ex DC., 1824.) Closely related to the next species, but with well-developed petals exceeding the sepals.

*A. fontinalis* (Short & Peter) Shinnars, comb. nov. *Sagina fontinalis* Short & Peter, Transylv. Journ. Med. 7: 600. 1836. *Stellaria fontinalis* (Short & Peter) B. L. Robinson, Proc. Amer. Acad. 29: 286. 1894. *Alsine fontinalis* (Short & Peter) Britton, Mem. Torr. Bot. Club 5: 356. 1894.

*A. Godfreyi* Shinnars, nom. nov. *Stellaria paludicola* Fernald & Schubert, Rhodora 50: 197. 1948. (Not *Arenaria plaudicola* B. L. Robinson, Proc. Amer. Acad. 29: 298. 1894.) *Stellaria uniflora* of authors, not Walter.

### 4. MISCELLANEOUS

*A. ludens* Shinnars, sp. nov. Perennis? (radix deest) tenella 14—16 cm. alta aspectu *Drymariae leptophyllae* (*D. tenellae*). Caulis ad lineas puberulus, apicem versus solum ramosus. Folia parva internodiis breviora subciliata cuspidata basi subconnata, inferiora obovato-lanceolata subpetiolata 6—7 mm. longa 2—3 mm. lata, superiora lineari-lanceolata 5—7 mm. longa 0.5—1.0 mm. lata. Inflorescentia laxa divaricatocymosa 9—13 cm. lata sat pauciflora parvibracteata. Pedicelli 3—7 mm. longi. Sepala 2.8 mm. longa ovato-lanceolata subacuminata glabra subscariosa cum costa unica viridi. Petala alba obtusiuscula sepalis quartam partem breviora. Capsula oblongo-ovoidea calyce paulum brevior dentibus nunc 4 nunc 6 dehiscens. Semina matura non visa. HOLOTYPE: infrequent above upper spring, igneous soil, Madera Canyon on Mt. Livermore, Davis Mts., alt. 7900 feet, Jeff Davis Co., Texas, Barton H. Warnock 7419, 11 Sept. 1947 (SMU). Two stems, presumably from two plants, are on the type sheet; the one at the left has 4-toothed capsules, that on the right 6-toothed. The latter is assumed to be the normal form, since the occurrence of 4-parted capsules is exceptional in the genus.

*A. LANUGINOSA* (Michaux) Rohrbach var. *cinerascens* (B. L. Robinson) Shinnars, comb. nov. *A. saxosa* var. *cinerascens* B. L. Robinson, Proc. Amer. Acad. 29: 293. 1894. If the variable western forms are treated as a variety rather than a subspecies, the earliest available epithet in the rank is *cinerascens*. Not credited to Texas by Maguire, although Robinson (1897, p. 240) cites *A. saxosa* from the Guadalupe

Mountains, Texas, collected by Havard. Its occurrence there is confirmed by the following specimen: Guadalupe Mountains 2.7 miles north of Pine Springs Camp near Highway 62, Culberson Co., *Eula Whitehouse* 17044, 22 Sept. 1946 (SMU).

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